

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
R. J. Baker et al.

Application No.: 09/941,557

Confirmation No.: 6108

Filed: August 30, 2001

Art Unit: 2613

For: OPTICAL INTERCONNECT IN HIGH-SPEED
MEMORY SYSTEMS

Examiner: D. D. Tran

REQUEST FOR RECONSIDERATION

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

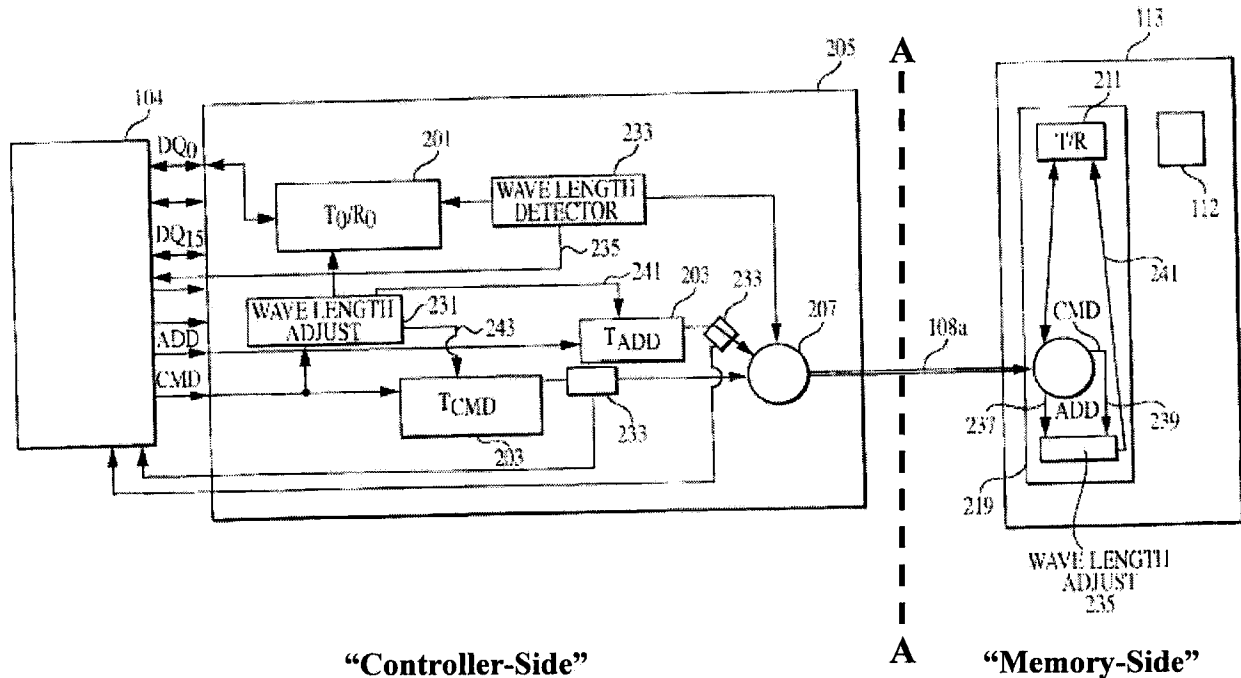
Dear Madam:

In response to the Office Action dated June 25, 2009, Applicants request reconsideration of the rejection of claims 1-3, 9, 15-25, 28, 33-36, 38, 40, 101-108, 111-113, 115, 118-120, 122, 151-154 and 159-162.

Claims 1-3, 28, 35, 101-104 and 120 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,651,139 (Ozeki) in view of U.S. Patent No. 5,367,397 (Tajima). Applicants respectfully traverse the rejection.

The claimed invention, as represented by the example embodiment of figure 4 (reproduced below and annotated), is directed to a memory system comprising a set of components separated into a "memory-side" and a "controller-side." The memory system "controller-side" includes, among other things, memory controller 104, electro-optical converter 205, wavelength detector 233 and wavelength adjuster 231. See Figure 4 (reproduced below). The wavelength

detector 231 detects the wavelength of optical signals sent from electro-optical converter 205 to the “memory side” via bi-directional optical link 108a. Para. [0027]. Based on the detected wavelength, the wavelength adjuster 231 adjusts the wavelength of optical signals sent from the electro-optical converter 205 to the “memory side” via bi-directional optical link 108a. *Id.*

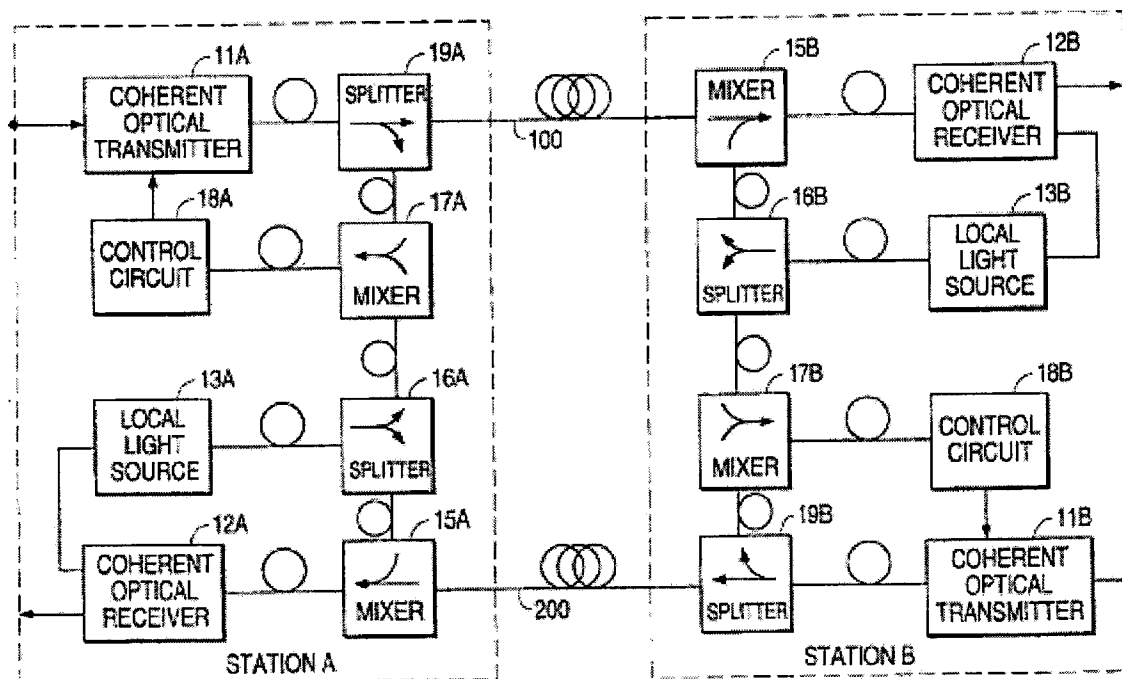


Present Application, Figure 4

Ozeki has been cited for showing an optical memory system, but it does not disclose the wavelength control specifically cited in claim 1. For this, the Office Action relies on the teachings of Tajima.

As shown in Figure 2 of Tajima (reproduced below), Tajima teaches optical communications between two stations (Station A and Station B) that are connected by one-way optical transmission lines 100 and 200. In particular, Station A sends communications to Station B on optical transmission line 100 and receives communications from Station B on optical transmission line 200. When Station A receives optical communications from Station B, the light received is “mixed with the light generated by the local light source 13A by the optical mixer 15A.”

Tajima, col. 3, lns. 60-62. The mixed signal is converted to an electrical signal which controls the local light source 13A. *Id.* at col. 3, lns. 62-67. The local light source 13A is then used to adjust the wavelength of the optical communications sent to Station B on optical transmission line 100 such that the “wavelength of light transmitted [corresponds] to the wavelength of the signal light sent from station B.” *Id.* at col. 3, ln. 67 to col. 4, ln. 2. The wavelength of optical communications sent to Station B, therefore, is based upon the wavelength of light received from Station B.



Tajima, Figure 2

Claim 1 recites, *inter alia*, “a wave length detector for detecting a wave length of optical signals sent from the controller-side electro-optical converter” to the memory side and “supplying the wave length to the memory controller; and a wave length adjuster for adjusting the wave length of the optical signals based upon the wave length.” The Ozeki/Tajima combination does not render obvious this limitation. The Office Action asserts that Tajima teaches “a wavelength control circuit 18 for detecting a wavelength of optical signals and for adjusting the wavelength based upon the wavelength.” Office Action, p. 3. As stated above, Tajima teaches wavelength adjustment based on

“the wavelength of the *incoming* signal light” (Tajima, Abstract) to mixer 15A, because the incoming signal light controls the local light source 13A, which is used to adjust the wavelength of outgoing signals. In contrast, and as exemplified in figure 4, the wavelength adjustment of claim 1 is based on the “wavelength of optical signals *sent*” to the memory side. The wavelength adjustment of Tajima, therefore, is very different than the wavelength adjustment of claim 1, and does not render obvious claim 1. The Office Action admits that Ozeki does not teach wavelength adjustment based on a wavelength. Office Action p. 3. As a result, the Ozeki/Tajima combination does not render obvious claim 1.

Similar to the limitations of claim 1 discussed above, claim 101 recites “generating wavelength adjustment information based upon” wavelength information from “an optical signal for *transmission* on an optical path,” and “adjusting the wavelength of said optical path based on wavelength adjustment information received from the controller.” Because claim 101 also recites wavelength adjustment based upon an optical signal “for *transmission* on an optical path,” Claim 101 is patentable over the Ozeki/Tajima combination for at least the reasons set forth above with respect to claim 1. Claims 2, 3, 28 and 35 depend from claim 1. Claims 102-104 and 120 depend from claim 101. Accordingly, the rejection should be withdrawn and the claims allowed.

Claims 24, 25, 33, 34, 36, 38, 40, 105-107, 115, 118, 119, 122, 151 and 159 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ozeki in view of Tajima and U.S. Patent No. 5,544,319 (Acton). Applicants respectfully traverse the rejection. Claims 24, 25, 33, 34, 36, 38, 40 and 151 depend from claim 1 and are patentable over the Ozeki/Tajima combination for at least the reasons set forth above with respect to claim 1. In addition, claims 106, 107, 115, 118, 119, 122, and 159 depend from claim 101 and are patentable over the Ozeki/Tajima combination for at least the reasons set forth above with respect to claim 101. Acton, cited as teaching command data and a clock signal, does not cure the deficiencies of the Ozeki/Tajima combination. Accordingly, the rejection should be withdrawn and the claims allowed.

Claims 9, 15-23, 108, 111-113, 152-154 and 160-163 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ozeki in view of Tajima, Acton and U.S. Patent No. 6,658, 210

(Fee). Applicants respectfully traverse the rejection. Claims 9, 15-23 and 152-154 depend from claim 1 and are patentable over the Ozeki/Tajima combination for at least the reasons set forth above with respect to claim 1. In addition, claims 108, 111-113, and 160-163 depend from claim 101 and are patentable over the Ozeki/Tajima combination for at least the reasons set forth above with respect to claim 101. Neither Acton, cited as teaching command data and a clock signal, nor Fee, cited as teaching multiplexed optical channels, cure the deficiencies of the Ozeki/Tajima combination. Accordingly, the rejection should be withdrawn and the claims allowed.

Applicant points out that the Office Action provides on page 6 an analysis for the rejection of claim 163, but claim 163 was canceled in an Amendment filed on April 22, 2009.

In view of the above, Applicants believe the pending application is in condition for allowance.

Dated: September 25, 2009

Respectfully submitted,

By 

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